DOCUMENT RESUME

ED 277 373 IR 051 714

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TITLE Librarianship: The Challenge of the Information and Electronic Revolution.
PUB DATE 21 Apr 86
NOTE 8p.; Paper presented at the Commonwealth Scientific and Industrial Research Organization (CSIRO) Librarians' Conference (April 21, 1986).
PUB TYPE Viewpoints (120) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Access to Information; Foreign Countries; *Futures (of Society); Information Dissemination; Information Systems; Information Technology; Information Transfer; Librarians; *Library Networks; *Library Role; Library Science; Online Systems; *Technological Advancement
IDENTIFIERS *Australia; *Commonwealth Scientific Ind Res Org (Australia)

ABSTRACT

Librarians need to take the initiative and seize the opportunities presented by a changing environment and society's demands for greater access to information. New technologies such as laser disks, machine indexing, telefacsimile, microcomputer applications, and fiber optics are having an immense impact on the practice of librarianship, and the role of the librarian is widening as the profession moves towards providing consulting services in a wide range of information-related areas. The reference librarian of the future will be more closely involved with research into better ways of providing information to users--e.g., making computer systems more friendly, creating more sophisticated databases, testing new technologies, and experimenting with different approaches to information--yet the emphasis on personal contact must not be lost. Today, the role of CSIRO (Commonwealth Scientific and Industrial Research Organization) in ensuring effective access to and use of knowledge is more important than ever, requiring an information professional of the highest standing. This professionalism will guarantee an excellent CSIRO scientific and technological information resource for Australia. (KM)

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ED277373

Librarianship: The Challenge of the Information and Electronic Revolution.

The Opening Address delivered by Mr. Peter Dunstan,

Director,

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At the CSIRO Librarians' Conference.

21 April, 1986

IR051714

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

One of the major outcomes of the last conference of CSIRO librarians in 1982 was the clear recognition that CSIRO must move to an on-line library management system if it were to maintain quality library services, develop new services and do this at a time of shrinking resources of both staff and money.

The outcome is the recently signed $1.26 million contract with the Canadian company, Geac Computers, for the installation of an integrated computer system for CLINES.

When the system is installed, CSIRO will have, for the first time, on-line access to all recent materials in its libraries, which hold some 1.5 million volumes and 40,000 current series. It will also assist you in sharing resources and so achieving even greater economies of scale. Most importantly, it will greatly facilitate research.

This conference will give all of you - CSIRO's senior librarians - some understanding and a more immediate appreciation of Geac and its place in CSIRO's Library Information Network System. The acquisition of the Geac system represents a major commitment. This commitment, however, is consistent with the emphasis that the Organization has placed on library and information services.

The system will meet the unusually complex requirements of the library network. These include:

*its size and spread;

*the wide range of specialist subject areas;

*the small number of highly specialized library staff;

*the complexity of the collections, most of which are long established and incorporate material acquired through unique exchange agreements;

*the unusual importance of serials, particularly 'difficult' serial literature such as irregular serials, monograph series and government reports which are hard to acquire and monitor;

*the unique structure of the network, with its mixture of divisional autonomy and centralized co-ordination.

CSIRO has acquired a powerful system in Geac - the best of its kind in the world and already in use in such great library systems as Yale, the Smithsonian Institute, the British Library and the Bibliotheque Nationale. Planning for the introduction of the system has been thorough and comprehensive. Now you have entered the very demanding, but exciting, implementation phase.

CLINES is an important aspect of the most compelling challenge facing librarians today - the dramatic and exciting rate of advance in information technology and telecommunications.

The 1982 meeting was vital to the continued development of the library system. Now, in 1986, you again meet, and it is at a critical time. Librarians must plan now for the new and expanded role demanded by the information age. We must seize the initiative and actively pursue opportunities, anticipate needs and strive to meet them.

At this critical juncture is an acceptance of innovation, a willingness to experiment, and a conviction to take a leadership role in the information revolution, are essential.

The saying 'knowledge is power' is as over used as it is true. There is no doubt that, in a world where ideas and knowledge can change almost overnight, access to information is a factor of increasing importance. Society as a whole is demanding greater access to information and, as the demands increase, so there is a tremendous increase in the responsibilities of those who know how to access that information.

Librarians need to take the initiative and seize the opportunities presented by a changing environment and these new demands. The library will have an expanded role in the future. Librarians will increasingly become 'information specialists' contributing to a wide range of information services.

Computers and databases in libraries were pioneered by CSIRO in the 1960's and are now taking off explosively. New technologies - laser disks, machine in-

dexing, telefacsimile, micro-computer applications, fibre optics - are having an immense impact on the practice of librarianship.

Libraries traditionally have served as the memory of humanity - the ultimate repository of human experience, knowledge and wisdom. Electronic networks could give the human race a much better memory; we would have quick and easy access to far more information.

Libraries are now undergoing drastic changes, and the acceleration of change that will occur in libraries between now and the year 2000 undoubtedly will be substantial. Societal changes and other external environmental modifications are directly affecting the configuration of libraries and their services. Strong, dynamic leadership is required to move our libraries into the 21st century.

The role of the librarian, always of the utmost importance in a research organization, is widening. The days when CSIRO librarians merely provided documents and papers on demand are long past. You make a vital contribution to every research project conducted by CSIRO. Effective scientific and technical research cannot be carried out without ready access to published information.

The profession generally is moving towards providing consultant services in a wide range of information related areas. Assistance with choosing and interrogating a database, organizing files and data are already standard services in many libraries.

The library of the future will be very different, but in many ways it is here today. It houses massive telecommunications and database hookups as well as information stored in a wide variety of forms and formats. This networking provides greatly expanded access to the world's data. These advanced technologies provide great benefits to the librarian and library users, but they also present challenges to information managers.

The library of the future certainly will yield to the growing popularity of optical disks to store information. Optical disks can contain incredible amounts

of data, as you know. I must confess to my interest in the optical disk program of the Washington Library of Congress. These 12" disks can serve to allow improved storage, preservation and access.

The CD-Rom, however, seems to be the main topic of conversation in the United States at the moment. It has implications for large datasets, long shelf life data, and in situations with a network of Personal Computers. But it is not seen to be the death knell for Online and neither are any of these developments to mean the end of printed publications.

The effective management of information is becoming more and more crucial because of the enormous amounts of information available, the increased complexities of retrieval, the problems of defining the right information to meet the request, and interpreting the request in terms the technology can understand.

The reference librarian of the future will be more closely involved with research into better ways of providing information to users. Their experience will be invaluable in a number of areas, for instance in making computer systems more user-friendly.

In addition, reference librarians will be involved in the creation of even more sophisticated databases, the testing of new technologies and experimentation with different approaches to information.

Librarians are not alone in this process of change. All professions are affected to some extent by the rapid changes demanded by the information age. If you have something that is outstanding and is operating in a changing environment the only way to keep it outstanding is to change. If you resist that change you will degrade.

Experimentation is essential, improvisation inevitable and the sharing of both successes and failures a professional and organizational imperative. The great responsibility, however, rests with the individual who must adapt and adopt the idea of change as a goal and mode of personal and organizational operation.

Librarians have a unique opportunity to take a leadership role in helping to prepare society for the information age. And you, CSIRO librarians, are at the leading edge of the profession in Australia.

The use of new technologies will continue to grow and must be utilized in ways that enhance the value of the profession. The library, in this age of communication technology, must become the key information-switching mechanism; but the emphasis on personal contact must not be lost in a maze of databases and up-market technology. We must find the balance. In marketing information services, customized service is vital.

A library is essentially a labor-intensive institutution because information transfer relies in a large part on person-to-person communication. Finding methods for making this process more efficient and effective is a challenge facing librarians today.

CSIRO libraries represent a major national resource in scientific and technical information. We have an obligation to use this resource in the national interest. The development and marketing of information has a very important place in CSIRO's total communication strategy. There are many good reasons to believe that we may already have Australia's most effective information service. However, I want to encourage its development even further so that it will also become international in time.

This means that we must be sure that our information systems are right; not only for the Organization, but for the marketing opportunities they will open up. We must make our expertise, and our information systems more accessible not only to those in CSIRO, but also to those outside the Organization who would benefit.

To conclude:

Today, in 1986, you are at a critical time in the development of effective information services and systems for this Organization. This is the Information Age, the era of telecommunications, digital machines, of computers and automation.

We will be seeking improved information services and cost-effective information services at a time of rapid technological and systems development, of expanding information availability and of continued economic constraints.

Even so, the end user consideration will be the most important consideration.

Your role, in ensuring an effective access to and use of knowledge, will be more important than ever, requiring an information professional of the highest standing.

This professionalism will guarantee a CSIRO scientific and technological information resource for Australia of excellence. As it was in the past, this must be our main objective as we move to the late 1980's.

I have much pleasure in opening this Conference.